

# Contents

About the North Pacific Marine Science Organization (PICES) / 7

## THE SIXTEENTH CENTURY

- A Pacific Ocean? / 9
- Triumphant Visions of the Boundless Ocean / 13
- That Exceedingly Vast Sea – Balboa and Magellan / 14
- Voyage in Search of Gold / 16
- Spanish Galleons Find Their Way across the Pacific / 17
- Japan and the Pacific / 20
- The Separation of Asia and America / 23
- Sir Francis Drake – How Far North? / 26

## THE SEVENTEENTH CENTURY

- Robert Dudley's Sea Atlas / 30
- The Voyages of Sebastián Vizcaíno / 31
- The Dutch Reach the Pacific / 33
- Early Maps of Korea / 39
- Early Maps of China / 40
- The Russians Reach the Pacific / 42
- Early Mapping of the American West Coast / 45
- Van Keulen's Sea Atlases / 48
- Japanese Knowledge of the Pacific / 50

## THE EIGHTEENTH CENTURY

- The East Asian Coast before Bering / 53
- Lost Islands and False Continents / 58
- Vitus Bering's First Voyage / 63
- Martin Spanberg's Voyage to Japan / 66
- Vitus Bering's Second Voyage / 67
- Georg Steller – First Scientist of the North Pacific / 70
- Alexei Chirikov's Voyage / 72
- De l'Isle's Fantastic Map / 75
- John Green's Map of the North Pacific / 76
- Gerhard Müller's Famous Map / 77
- The Russians Discover the Aleutians / 80
- The Spanish Northward Voyages / 85
- Bruno Hezeta Maps the Northwest Coast / 89
- Bodega y Quadra's Epic Voyage / 91
- James Cook Defines the Northeast Pacific / 92
- The Lovtsov Atlas of the North Pacific Ocean / 100
- La Pérouse – The French Answer to Cook / 102
- Billings and Sarychev / 107
- Fur Traders of the Northwest Coast / 108
- The Sea That Never Was / 109
- The Maps of Aaron Arrowsmith / 110
- The Spanish Probe the Strait of Juan de Fuca / 112
- Malaspina's Voyage – The Spanish Answer to Cook / 113
- The Last Spanish Explorations / 114
- The Spanish Define the West Coast / 116
- George Vancouver's Epic Survey / 119
- Broughton Charts the West Pacific / 125

## THE NINETEENTH CENTURY

- The First Russian Circumnavigation / 127
- Mamiya and Sakhalin / 129
- The Voyages of Otto Kotzebue / 132
- Fedor Lütke's Scientific Voyage / 134
- The United States Exploring Expedition / 136
- Mikhail Tebenkov's Atlas / 140
- Commodore Perry's Black Ships –  
    The U.S. Japan Expedition / 142
- The U.S. North Pacific Exploring Expedition / 146
- Matthew Fontaine Maury's Wind and Current Charts / 152
- Becher's Navigation of the Pacific Ocean / 157
- British Admiralty Hydrographic Surveying / 158
- Coastal Surveys of the United States / 160
- Tuscarora* Discovers the Deeps / 164
- Exploring the Depths – The *Challenger* Expedition / 168
- The Maps of Sir John Murray / 172
- The Voyage of the *Nero* / 174
- Whaling and Sealing in the North Pacific / 176

## THE TWENTIETH CENTURY

- The Prince Maps the Depths / 180
- The Coming of Sonar / 182
- The Last Cruise of *Carnegie* / 183
- The Great Cooperative Effort – NORPAC / 184
- The Voyages of *Vityaz* / 186
- Envisioning the Sea Floor / 188
- The U.S. Navy's Climatic Atlas / 190
- The Bathymetry of the North Pacific / 191
- The Ocean Drilling Program / 194
- The International Decade of Ocean Exploration / 195
- The Pacific Salmon / 196
- The Origin of the Continents and Oceans / 198
- Destructive Waves – Pacific Tsunamis / 202
- Multibeam Bathymetry Reveals the Details / 204
- The Satellite Sees All / 206
- The World Ocean Circulation Experiment / 211

The Future – Project Argó / 212

Map Sources / 213

Map Catalog / 213

Bibliography / 220

Index / 222